What is claimed is:

1. A plating method comprising:

preparing a substrate having a relatively narrow recess and a relatively broad recess defined in a surface thereof;

performing first plating under plating conditions for filling a metal in said narrow recess; and then

performing second plating under plating conditions for filling a metal in said broad recess.

2. A plating method according to claim 1, wherein entire surfaces of said narrow recess and said broad recess are fully covered with a seed layer.

3. A plating method according to claim 1, wherein said first plating is performed under plating conditions for a relatively high bottom-up capability, and said second plating is performed under plating conditions for a relatively high leveling capability.

4. A plating method according to claim 1, wherein said narrow recess has a width less than 0.2 μm and said broad recess has a width of 0.2 μm or greater.

5. A plating method according to claim 1, wherein said substrate has a plurality of said narrow recesses defined in the surface thereof.

6. A plating method according to claim 1, wherein said substrate has a plurality of said broad recesses defined in the surface thereof.

7. A plating method according to claim 1, wherein said first plating and said second plating are performed under plating conditions including different current densities upon plating.

8. A plating method according to claim 7, wherein said second plating process is performed under plating conditions including a current density higher than said first plating.

9. A plating method according to claim 8, wherein said first plating is performed under plating conditions including a current density upon plating ranging from 0.1 to 1.5 A/dm^2, and said second plating is performed under plating conditions including a current density upon plating ranging from 2 to 7 A/dm^2.

10. A plating method according to claim 9, wherein said second plating process is performed with a current density which increases more progressively than said first plating.

11. A plating method according to claim 1, wherein said second plating is performed at a higher plating rate than said first plating.

12. A plating method according to claim 11, wherein said

first plating is performed using a copper sulfate plating solution having a large proportion of an accelerator component.

13. A plating method according to claim 12, wherein said accelerator component comprises a sulfur-based organic compound.

14. A plating method according to claim 1, wherein after said first plating is performed, a reverse electric field is applied for a short period of time, and thereafter said plating is performed.

15. A plating method according to claim 1, wherein said first plating and said second plating are performed using plating solutions containing different additives added thereto.

16. A plating method according to claim 15, wherein the additive added to the plating solution used in the first plating has a relatively high bottom-up capability, and the additive added to the plating solution used in the second plating has a relatively high leveling capability.

17. A plating method according to claim 15, wherein the plating solutions used in said first plating and said second plating comprise a copper sulfate plating solution, and the plating solution used in said second plating has a less accelerator component and a more leveler component than the plating solution used in said first plating.

18. A plating method according to claim 1, wherein said first plating and said second plating are performed using plating solutions having different compositions.

19. A plating method according to claim 18, wherein the plating solutions used in said first plating and said second plating comprise a copper sulfate plating solution, and the plating solution used in said second plating has a lower copper concentration and a lower sulfuric acid concentration than the plating solution used in said first plating.

20. A plating method according to claim 1, wherein said first plating and said second plating are performed under plating conditions including different relative speed of the plating solution upon plating.

21. A plating method according to claim 1, wherein an additive added to a plating solution used in the first plating has a relatively high bottom-up capability, an additive added to a plating solution used in the second plating has a relatively high leveling capability, and a current density in said second plating is greater than a current density in said first plating.

22. A plating method according to claim 1, wherein plating solutions used in said first plating and said second plating comprise a copper sulfate plating solution, the plating solution used in said second plating has a lower copper concentration and

a lower sulfuric acid concentration than the plating solution used in said first plating, and a current density in said second plating is greater than a current density in said first plating.

23. A plating method according to claim 1, wherein before said first plating is performed, a voltage is applied between the substrate and an anode which has been in contact with a plating solution before the substrate is brought into contact with the plating solution, and the voltage remains applied and said substrate and said plating solution are brought into contact with each other.

24. A plating method according to claim 23, wherein until said substrate and said plating solution are brought into full contact with each other, a voltage is applied between said substrate and said anode with a voltage control process which controls the voltage at a predetermined value, and then said first plating is performed with a current control process which controls a current flowing between said substrate and said anode at a predetermined value.

25. A plating method according to claim 23, wherein until said substrate and said plating solution are brought into full contact with each other, a voltage is applied between said substrate and said anode with a voltage control process which controls the voltage at a predetermined value, and then said first plating is performed with a voltage control process which controls a voltage applied between said substrate and said anode

at a predetermined value.

26. A plating method according to claim 1, wherein said first plating and said second plating are performed by an impregnation plating process.